

Application No. 09/934310
Page 3

Amendment
Attorney Docket No. S63.2N-8429-US04

Amendments To The Specification:

Please amend the specification as follows:

Please replace the paragraph beginning on page 8 line 15 with the following two paragraphs:

FIG. 5A is a scale drawing of an embodiment of the stent of the present invention, the stent having a tapered diameter in its post-expansion mode;

FIG. 5B is a scale drawing of an embodiment of the stent of the present invention, the stent having a tapered diameter in its post-expansion mode;

FIG. 5C is a schematic of an embodiment of the stent of the present invention in an expanded state with a tapered diameter;

Please replace the paragraph beginning on page 17 line 7 with the following paragraph:

Figures 5A and 5C shows a second embodiment of the present invention in which the stent 10 in its expanded form has a gradual taper from proximal end 12 to distal end 14. In FIG. 5A, The shaded segments 72, 74, 76, 78, 80, 82 and 84 of expansion struts 28 represent regions of expansion struts 28 to be removed. As shown schematically in FIG. 5C, Removal of the shaded segments 72, 74, 76, 78, 80, 82, and 84 provides stent 10 with a gradual taper when expanded with distal end 14 having a smaller expanded diameter than proximal end 12. The degree of shortening of the expanded diameter of the stent 10 at a given expansion column 24 will be proportional to the length of the removed segment 72, 74, 76, 78, 80, 82, or 84 at that expansion column 24. In the expanded stent 10 the shortened expansion struts 28 will have a shortened component along the circumference of the stent resulting in a shortened circumference and diameter. The tapered diameter portion can be positioned anywhere along the length of stent

Application No. 09/934310
Page 4

Amendment
Attorney Docket No. S63.2N-8429-US04

10, and the tapering can be made more or less gradual by removing appropriately larger or smaller portions of the expansion struts 28 in a given expansion column 24.

Please replace the paragraph beginning on page 18 line 1 with the following paragraph:

Another way to achieve a tapered expanded stent is to change the stiffness of the stent struts, expansion struts, connecting struts or joining struts such that the stiffness of the struts varies along the length of the stent. The stiffness of the struts can be changed by altering length, width or thickness, adding additional stiffening material, using a chemical or mechanical means to alter the physical properties of the stent material, or applying one or a series of elastic elements about the stent. Figure 5B shows an embodiment of the present invention where the stiffness of the connecting struts is changed by altering the length of the connecting struts as described above. The shaded segments 72, 74, 76, 78, 80, 82 and 84 of connection struts 38 represent regions of connection struts 38 to be removed in order to provide the tapered configuration described. A stent having this configuration is shown in Fig. 5C in the expanded state.

Please replace the paragraph beginning on page 18 line 13 with the following paragraph:

Using a tapered balloon to expand a non-tapered stent will also achieve a tapered expanded stent; however, since no metal is removed from the stent, the stent is tapered as a result of incomplete expansion. The stent will therefore have increased metal fraction at the tapered end resulting in increased risk of acute thrombosis. Metal fraction is the proportion of the surface of the expanded stent covered by the stent strut material. Shortening the expansion struts as shown in Figures 5A and 5C allows for a tapered expanded stent with substantially constant metal fraction along its length.